

Applicant : Jonathan H. Young et al.  
Serial No. : 09/390,370  
Filed : September 7, 1999  
Page : 17 of 27

Docket No.: 13865-023001

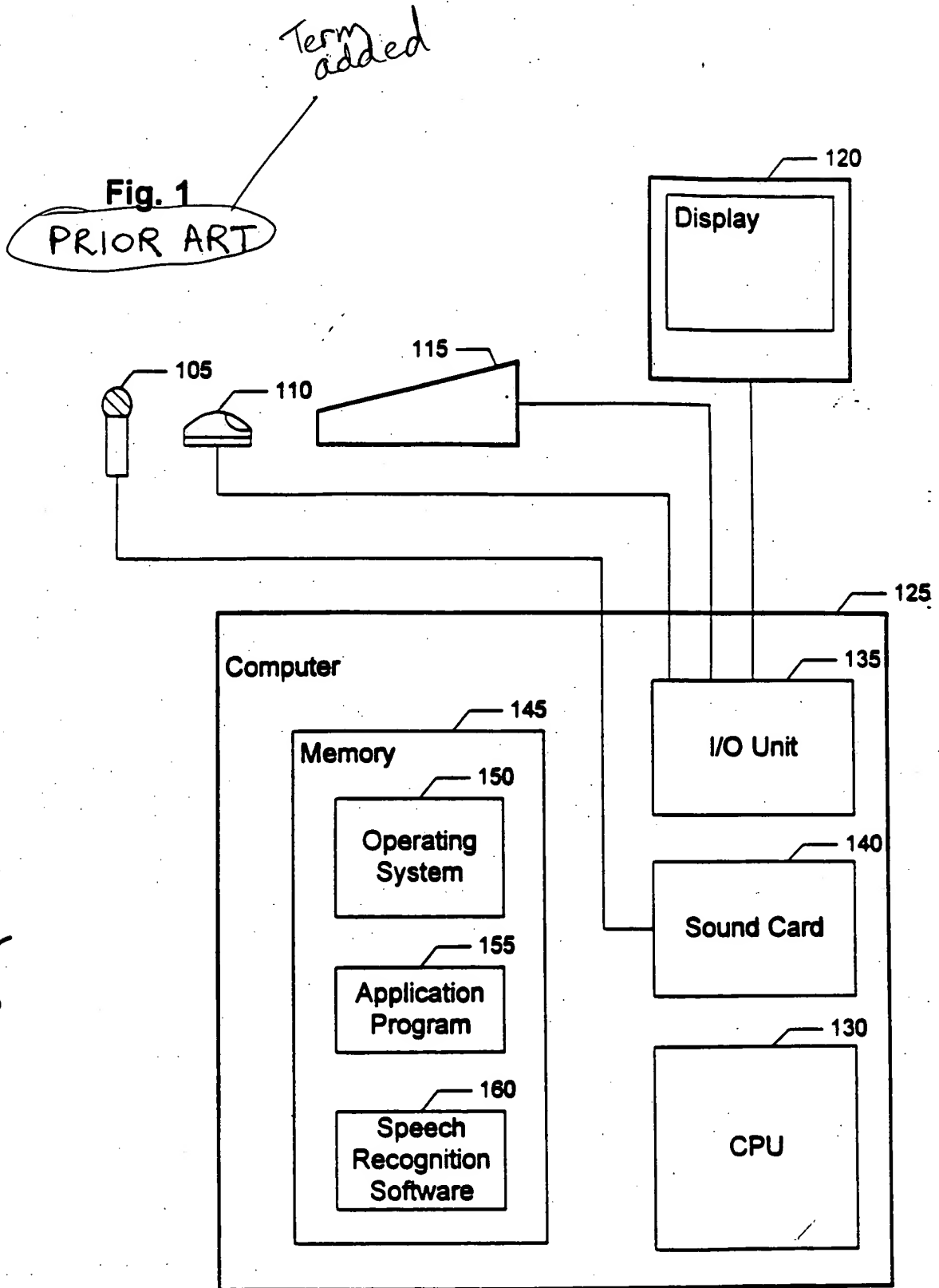
Amendments to the Drawings:

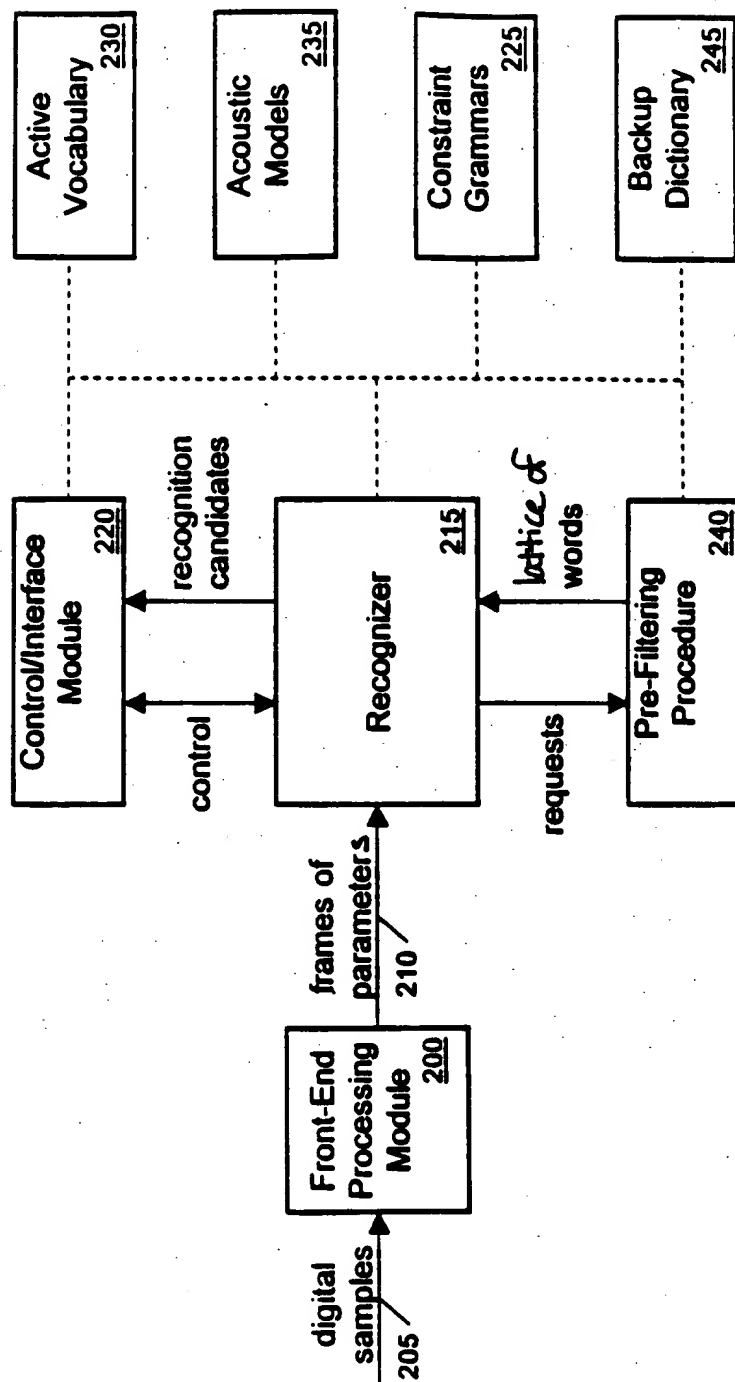
The attached replacement sheets of drawings include changes to Figs. 1-12 and replace the original sheets.

In Figs. 1-12, the term "PRIOR ART" has been added.

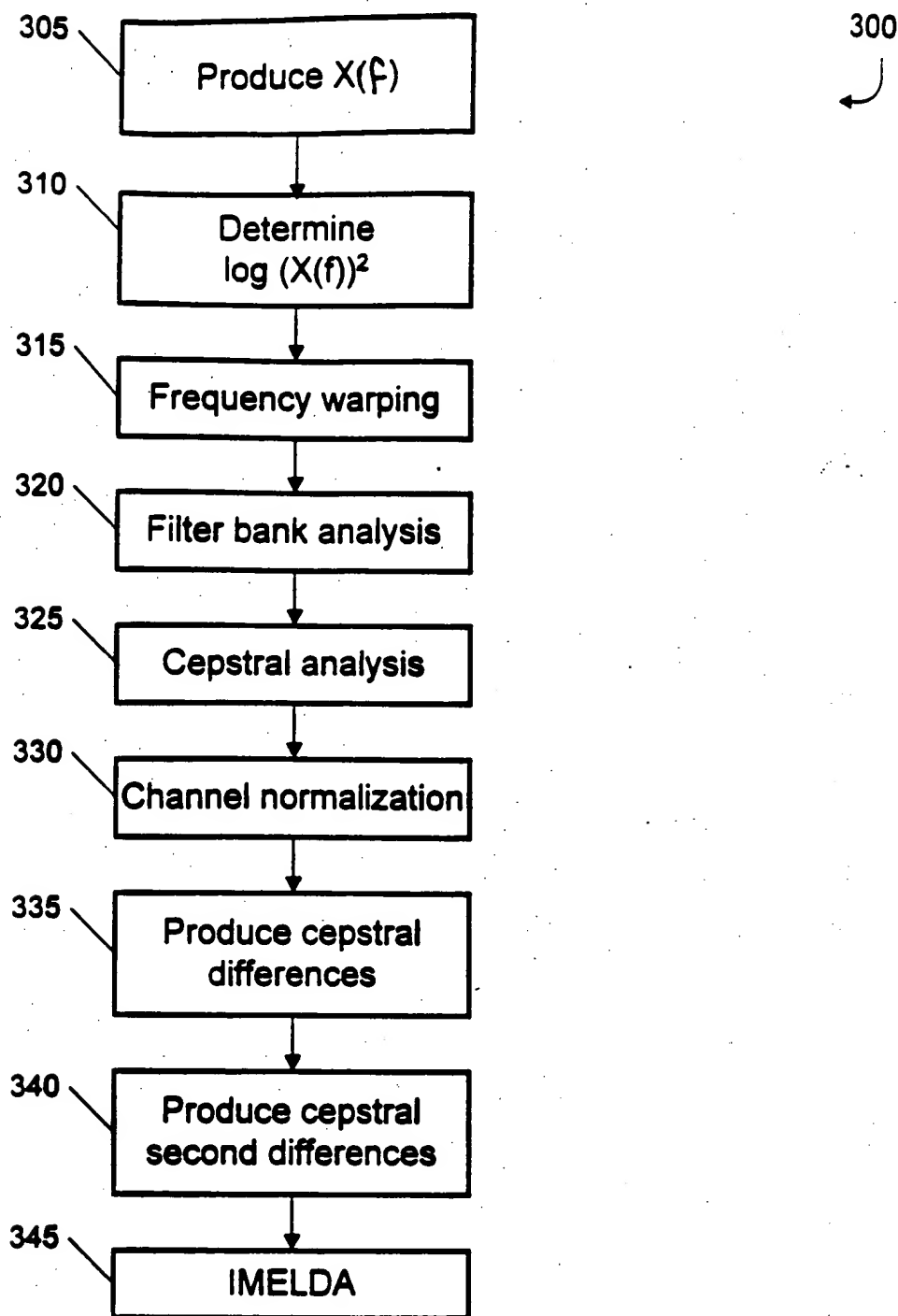
Attachments following last page of this Amendment:

Replacement Sheet (11 pages)  
Annotated Sheet Showing Change(s) (11 pages)





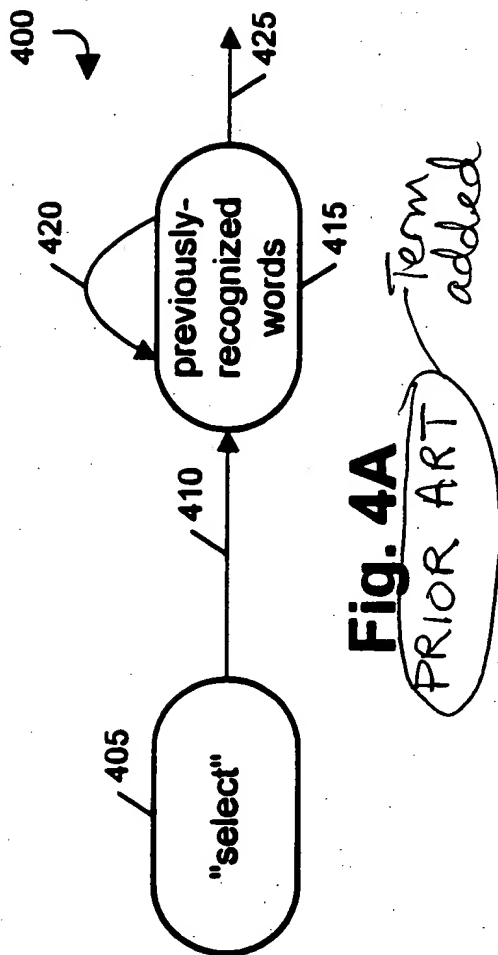
Term added  
**Fig. 2**  
PRIOR ART



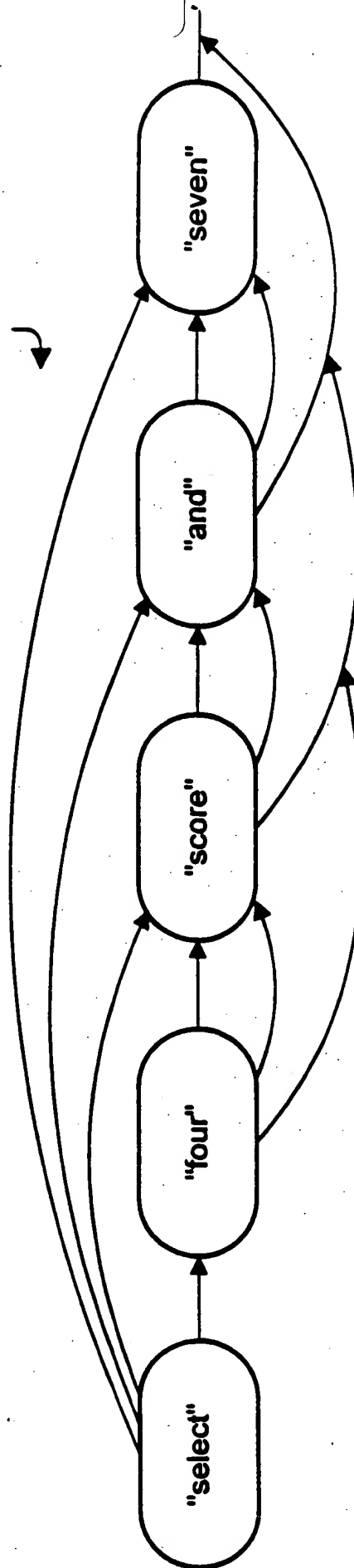
**Fig. 3**

PRIOR ART

*Term added*



450



**Fig. 4B**  
PRIOR ART

Term added

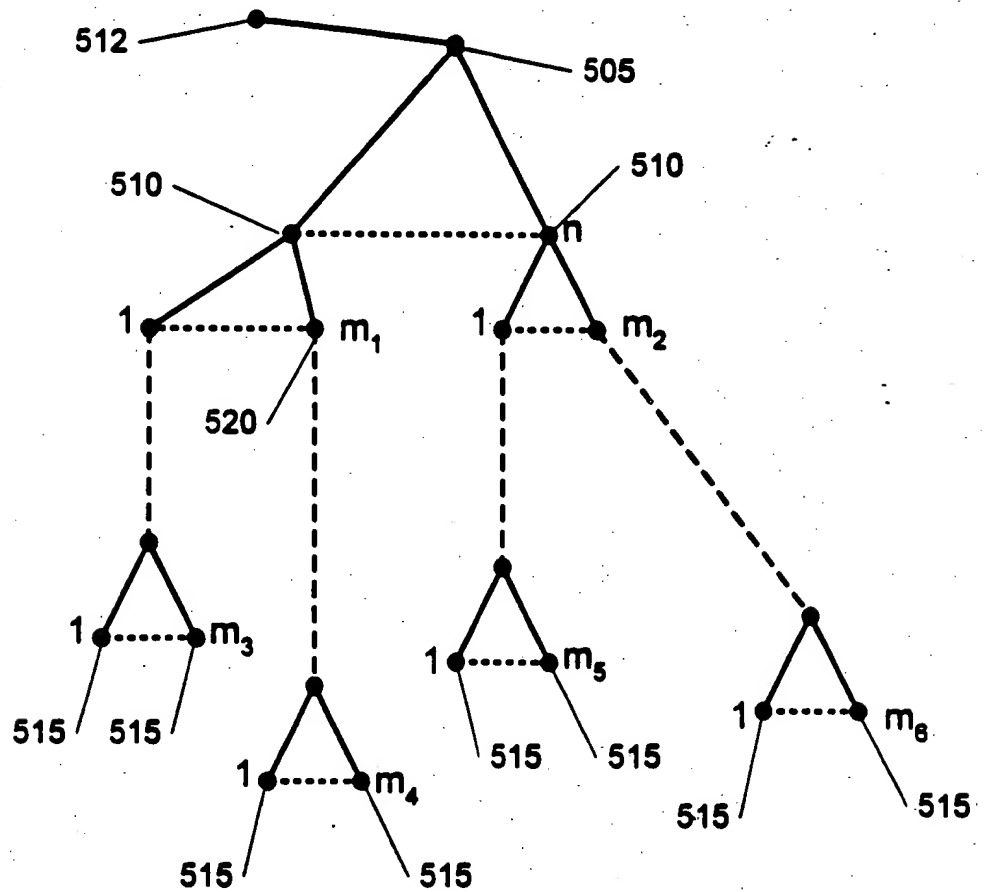


500

**Fig. 5**

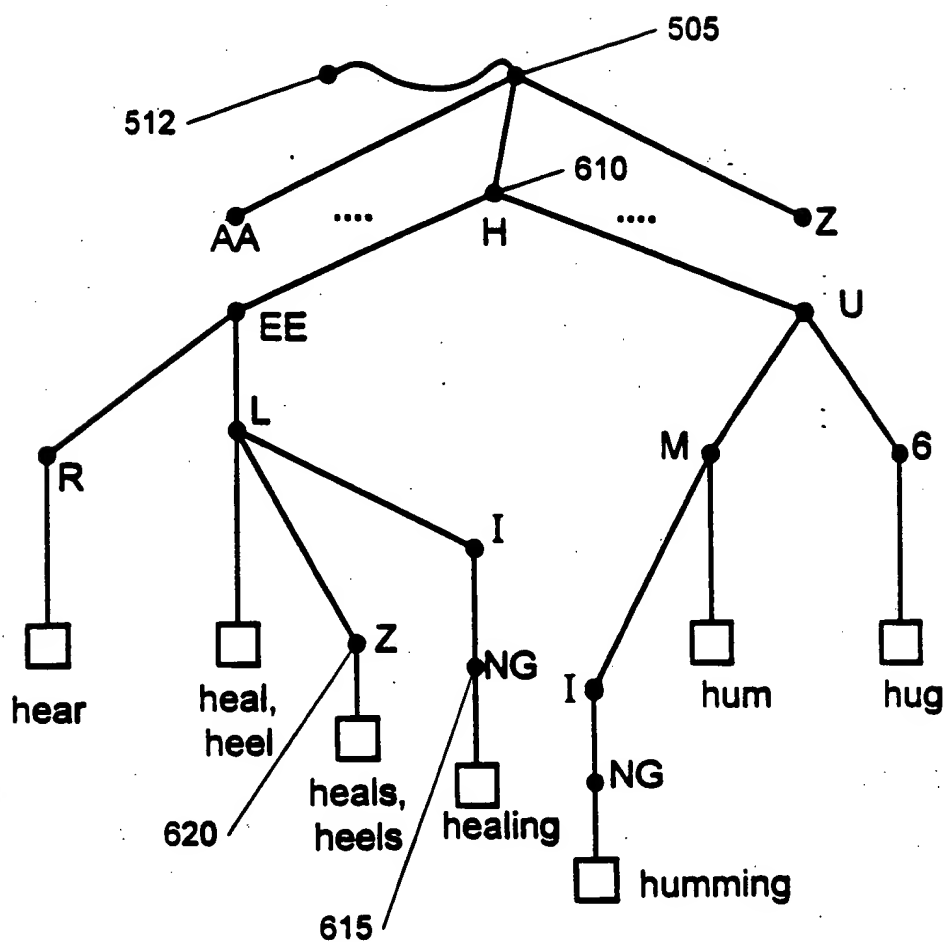
PRIOR ART

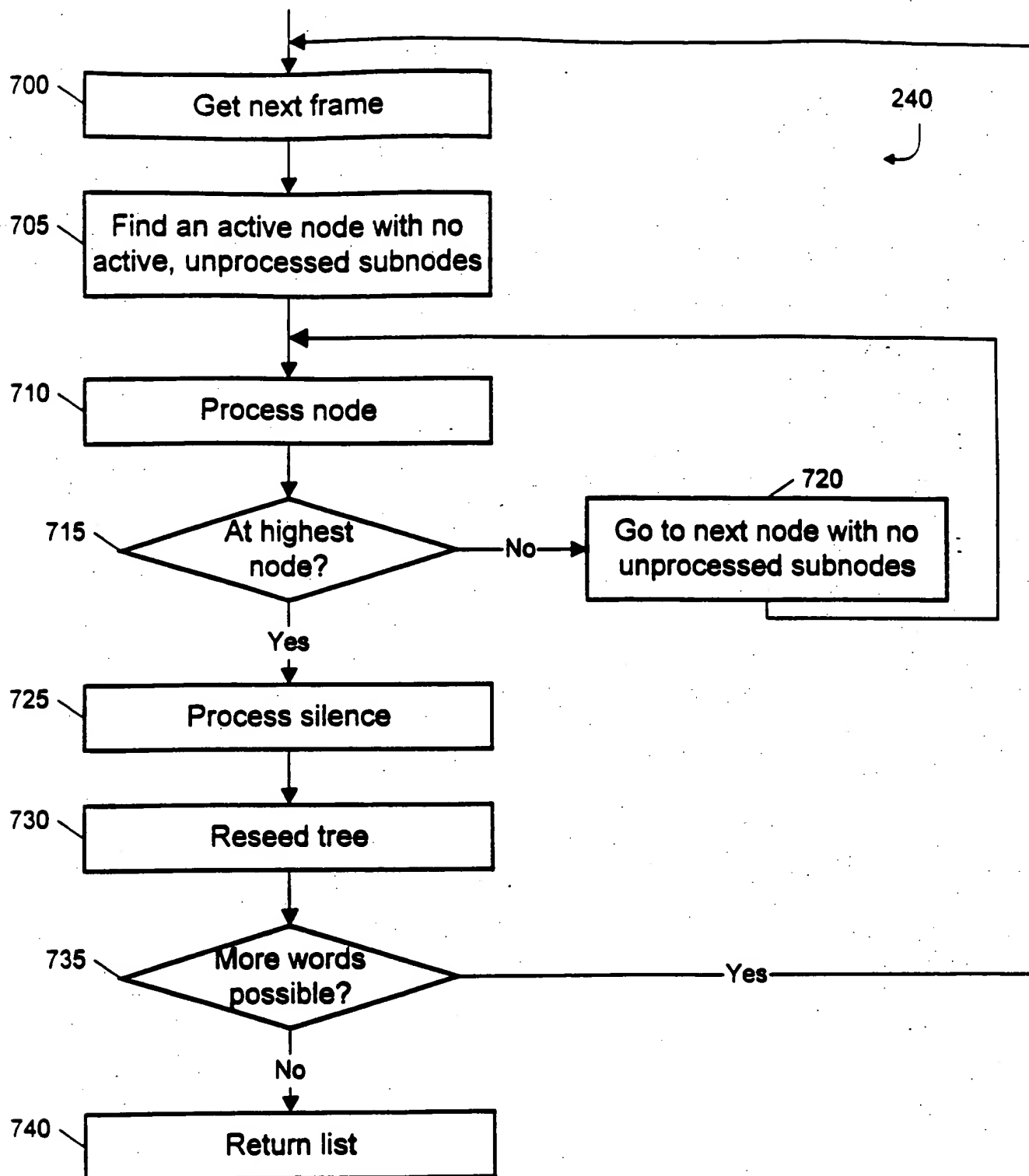
Term  
added



PRIOR ART

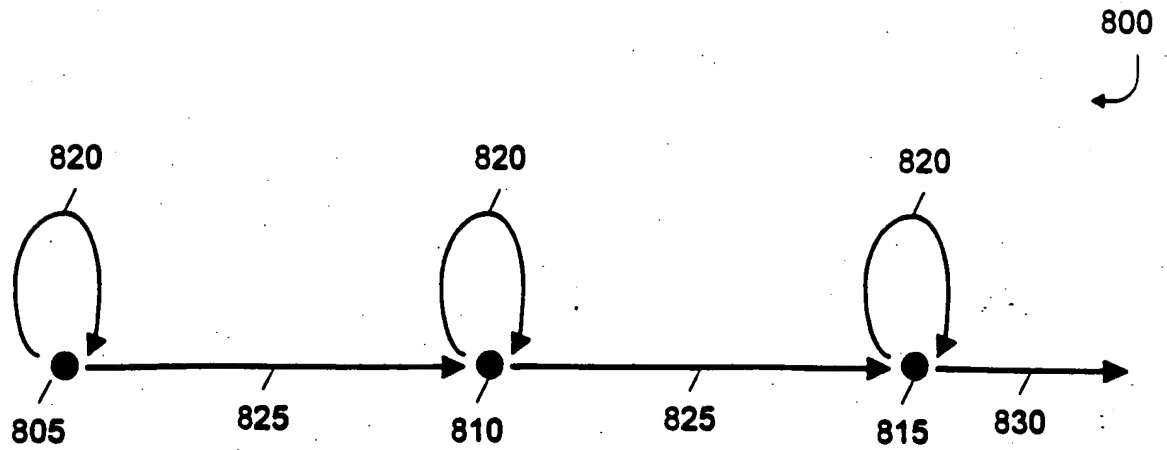
Term added





**Fig. 7**  
Term added  
PRIOR ART



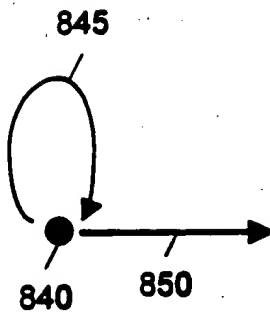


**Fig. 8A**

PRIOR ART

Term added

512

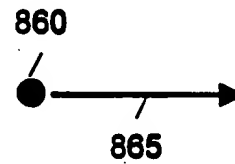


**Fig. 8B**

PRIOR ART

Term added

505



**Fig. 8C**

PRIOR ART

Term added

Applicant(s): Jonathan H. Young et al.  
 EXPANDING AN EFFECTIVE VOCABULARY OF A SPEECH  
 RECOGNITION SYSTEM  
 ANNOTATED SHEET

Frame	840 ("A")	805 ("B")	810 ("C")	815 ("D")	Next Node ("N")
900 — 0	0	—	—	—	—
905 — 1	$S_{A1} = A_{A1}$	$S_{B1} = A_{B1}$	—	—	—
910 — 2	$S_{A2} = S_{A1} + A_{A2}$	$S_{B2} = \min(S_{B1}, \text{stay}_B, S_{A1}) + A_{B2}$	$S_{C2} = S_{B1} + \text{leave}_B + A_{C2}$	—	—
915 — 3	$S_{A3} = S_{A2} + A_{A3}$	$S_{B3} = \min(S_{B2}, \text{stay}_B, S_{A2}) + A_{B3}$	$S_{C3} = \min(S_{C2}, \text{stay}_C, S_{B2} + \text{leave}_B) + A_{C3}$	$S_{D3} = S_{C2} + \text{leave}_C + A_{D3}$	—
920 — 4	$S_{A4} = S_{A3} + A_{A4}$	$S_{B4} = \min(S_{B3}, \text{stay}_B, S_{A3}) + A_{B4}$	$S_{C4} = \min(S_{C3}, \text{stay}_C, S_{B3} + \text{leave}_B) + A_{C4}$	$S_{D4} = \min(S_{D3}, \text{stay}_D, S_{C3} + \text{leave}_C) + A_{D4}$	$S_{N4} = S_{D2} + \text{leave}_D + A_{D4}$
925 — n	$S_{An} = S_{A(n-1)} + A_{An}$	$S_{Bn} = \min(S_{B(n-1)}, \text{stay}_B, S_{A(n-1)}) + A_{Bn}$	$S_{Cn} = \min(S_{C(n-1)}, \text{stay}_C, S_{B(n-1)} + \text{leave}_B) + A_{Cn}$	$S_{Dn} = \min(S_{D(n-1)}, \text{stay}_D, S_{C(n-1)} + \text{leave}_C) + A_{Dn}$	$S_{Nn} = \min(S_{N(n-1)}, \text{stay}_N, S_{D(n-1)} + \text{leave}_D) + A_{Nn}$

Fig. 9

PRIOR ART

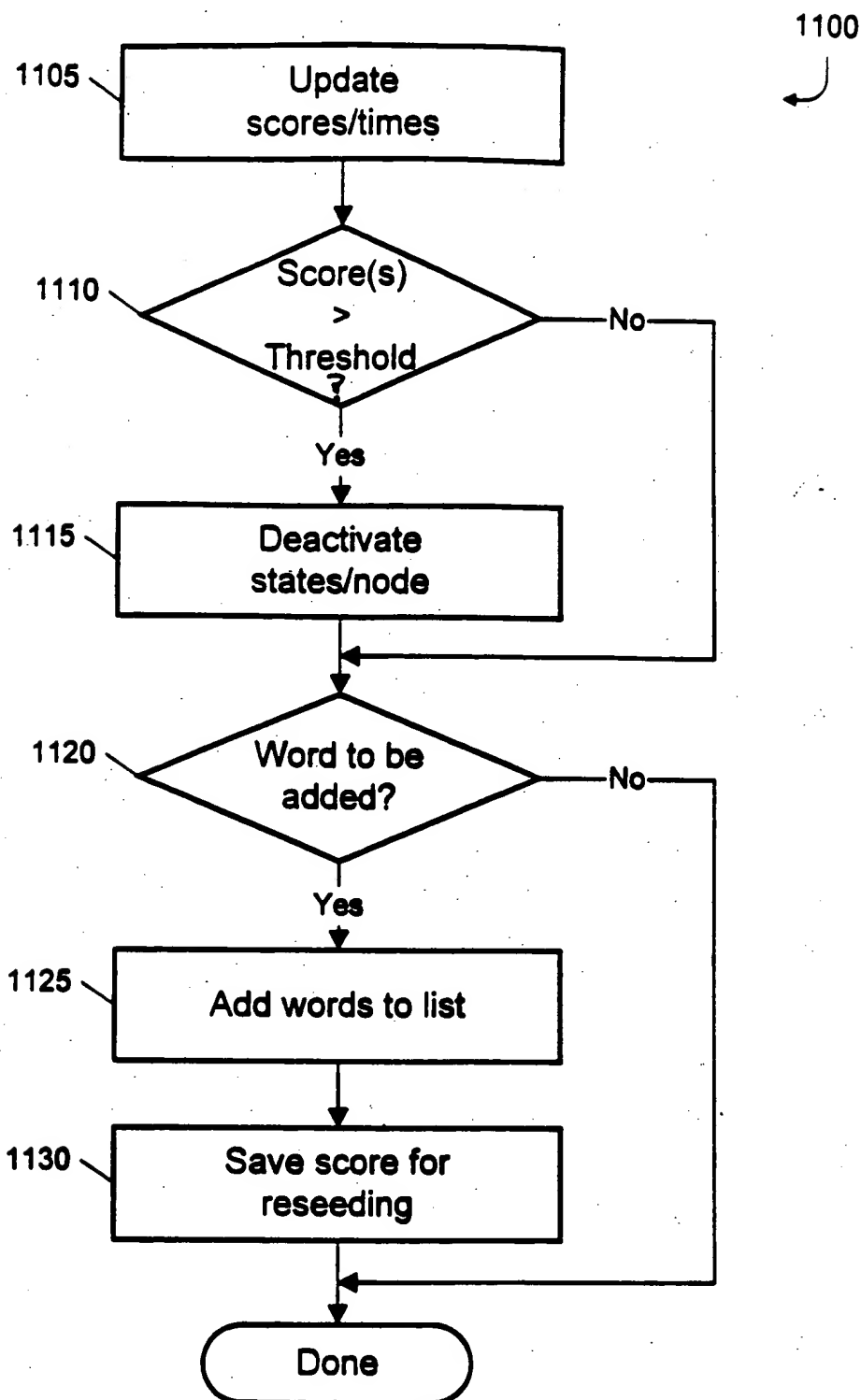
Term added

Frame	810 ("A")	805 ("B")	810 ("C")	815 ("D")	Next Node ("N")
900 — 0	$S_{A0} = 0$	—	—	—	—
905 — 1	$S_{A1} = f(S_{A0}, A_{A1})$	$S_{B1} = f(S_{A0}, A_{B1})$	—	—	—
910 — 2	$S_{A2} = f(S_{A1}, A_{A2})$	$S_{B2} = f(S_{B1}, \text{stay}_B, S_{A1}, A_{B2})$	$S_{C2} = f(S_{B1}, \text{leave}_B, A_{C2})$	—	—
915 — 3	$S_{A3} = f(S_{A2}, A_{A3})$	$S_{B3} = f(S_{B2}, \text{stay}_B, S_{A2}, A_{B3})$	$S_{C3} = f(S_{C2}, \text{stay}_C, S_{B2}, \text{leave}_B, A_{C3})$	$S_{D3} = f(S_{C2}, \text{leave}_C, A_{D3})$	—
920 — 4	$S_{A4} = f(S_{A3}, A_{A4})$	$S_{B4} = f(S_{B3}, \text{stay}_B, S_{A3}, A_{B4})$	$S_{C4} = f(S_{C3}, \text{stay}_C, S_{B3}, \text{leave}_B, A_{C4})$	$S_{D4} = f(S_{D3}, \text{stay}_D, S_{C3}, \text{leave}_C, A_{D4})$	$S_{N4} = f(S_{D3}, \text{leave}_D, A_{N4})$
925 — n	$S_{An} = f(S_{A(n-1)}, A_{An})$	$S_{Bn} = f(S_{B(n-1)}, \text{stay}_B, S_{A(n-1)}, A_{Bn})$	$S_{Cn} = f(S_{C(n-1)}, \text{stay}_C, S_{B(n-1)}, \text{leave}_B, A_{Cn})$	$S_{Dn} = f(S_{D(n-1)}, \text{stay}_D, S_{C(n-1)}, \text{leave}_C, A_{Dn})$	$S_{Nn} = f(S_{D(n-1)}, \text{leave}_D, A_{Nn})$

Fig. 10

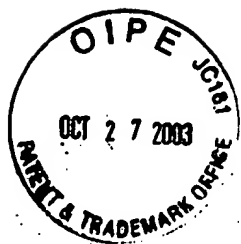
PRIOR ART

Term added



**Fig. 11**  
PRIOR ART

*Term added*

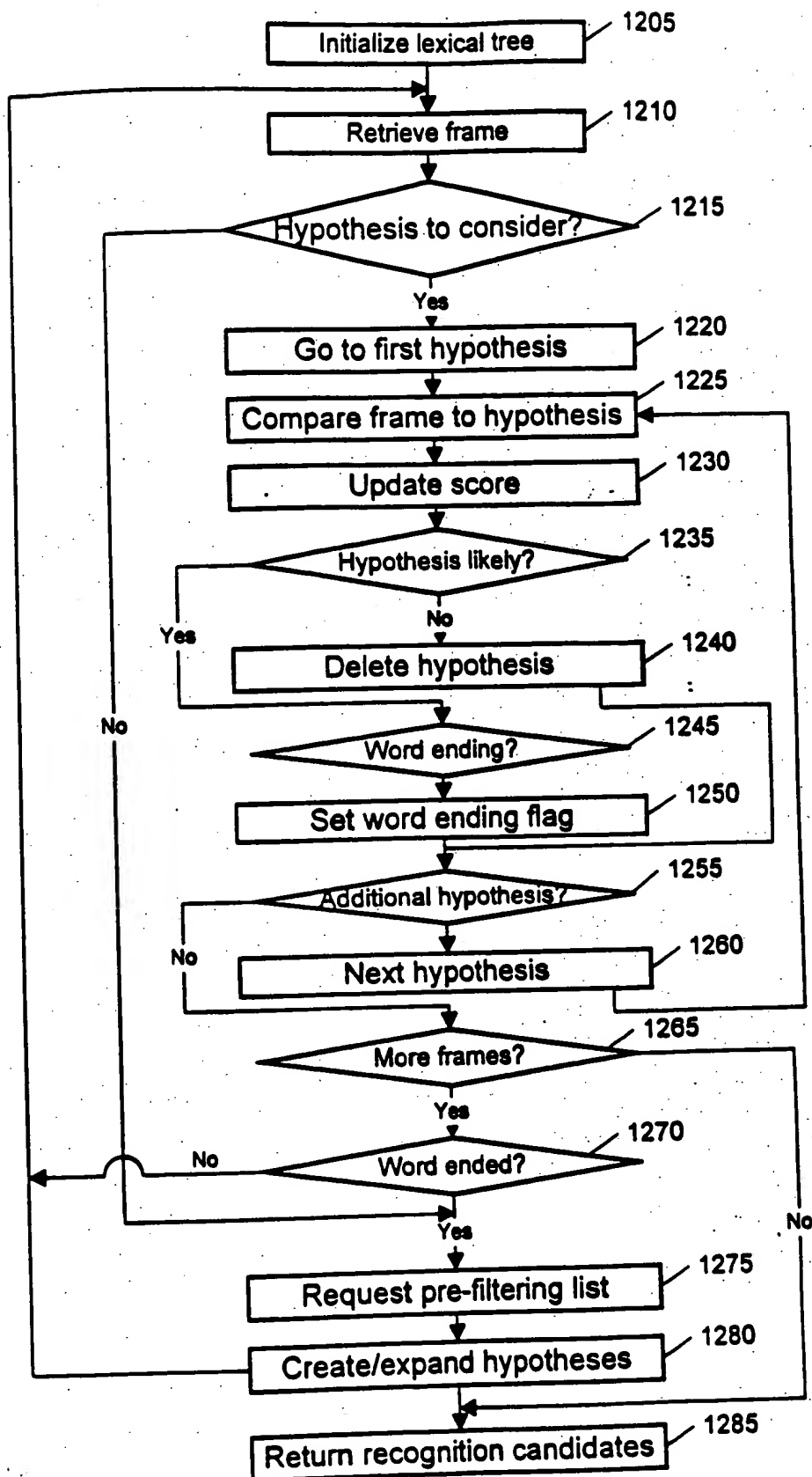


1200

Fig. 12

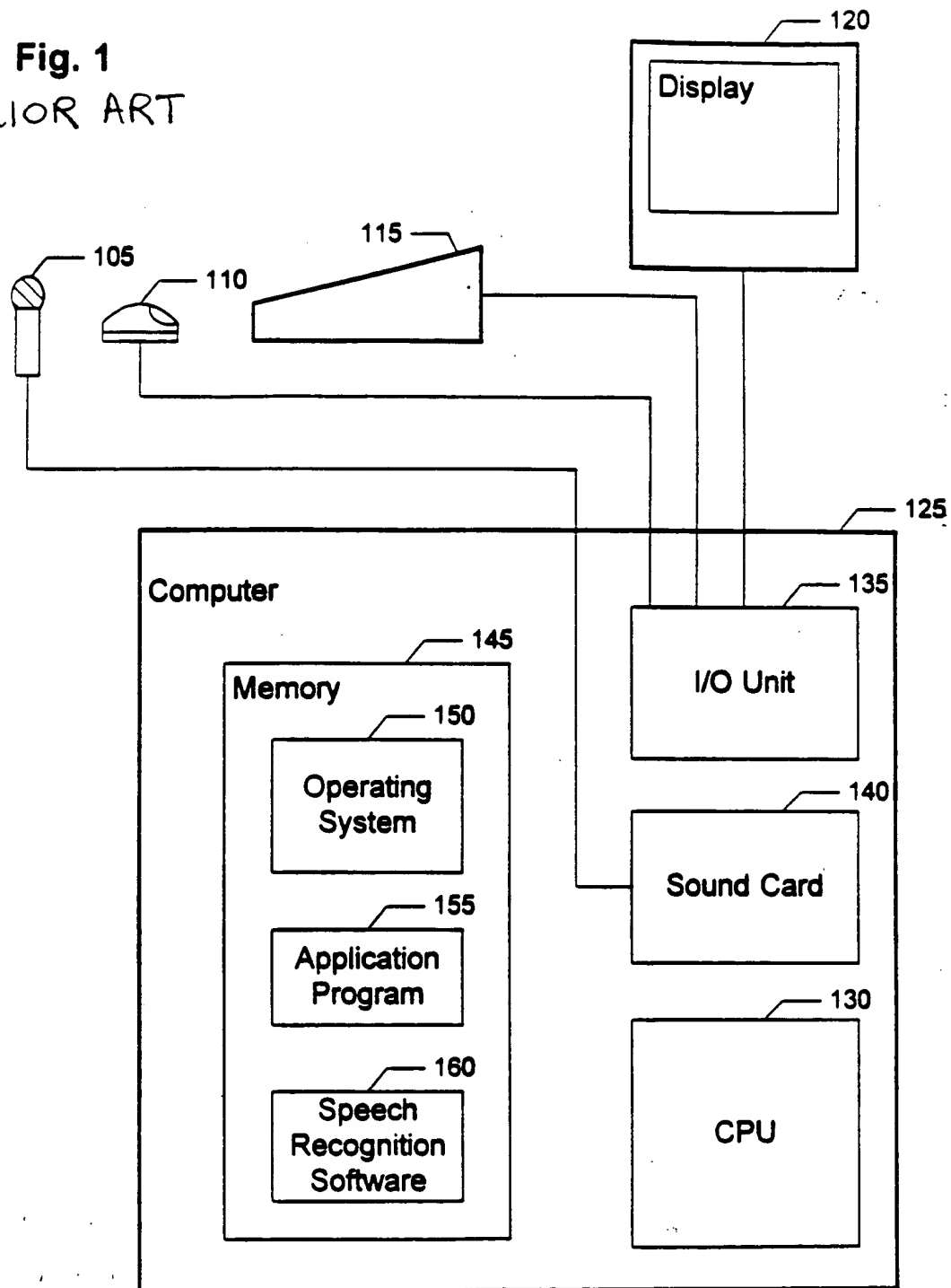
PRIOR ART

Term  
added





**Fig. 1**  
PRIOR ART



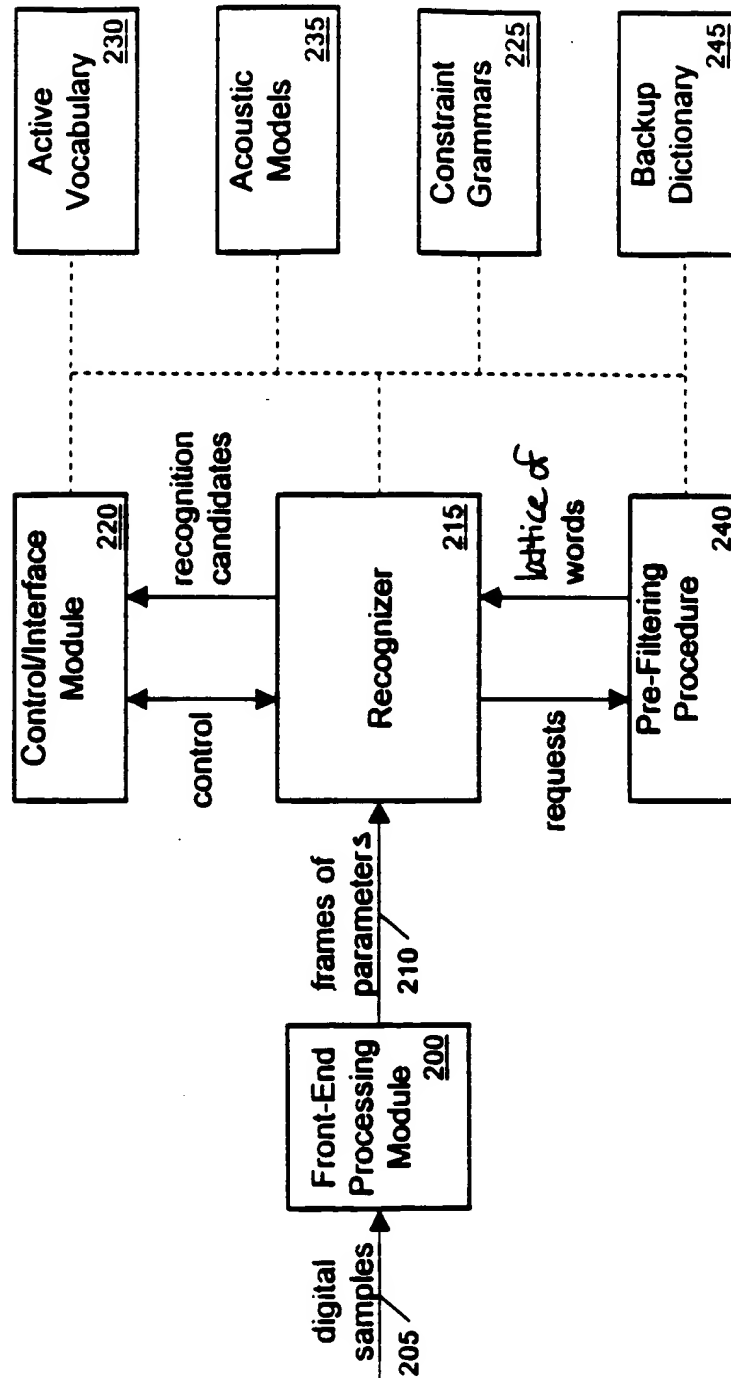
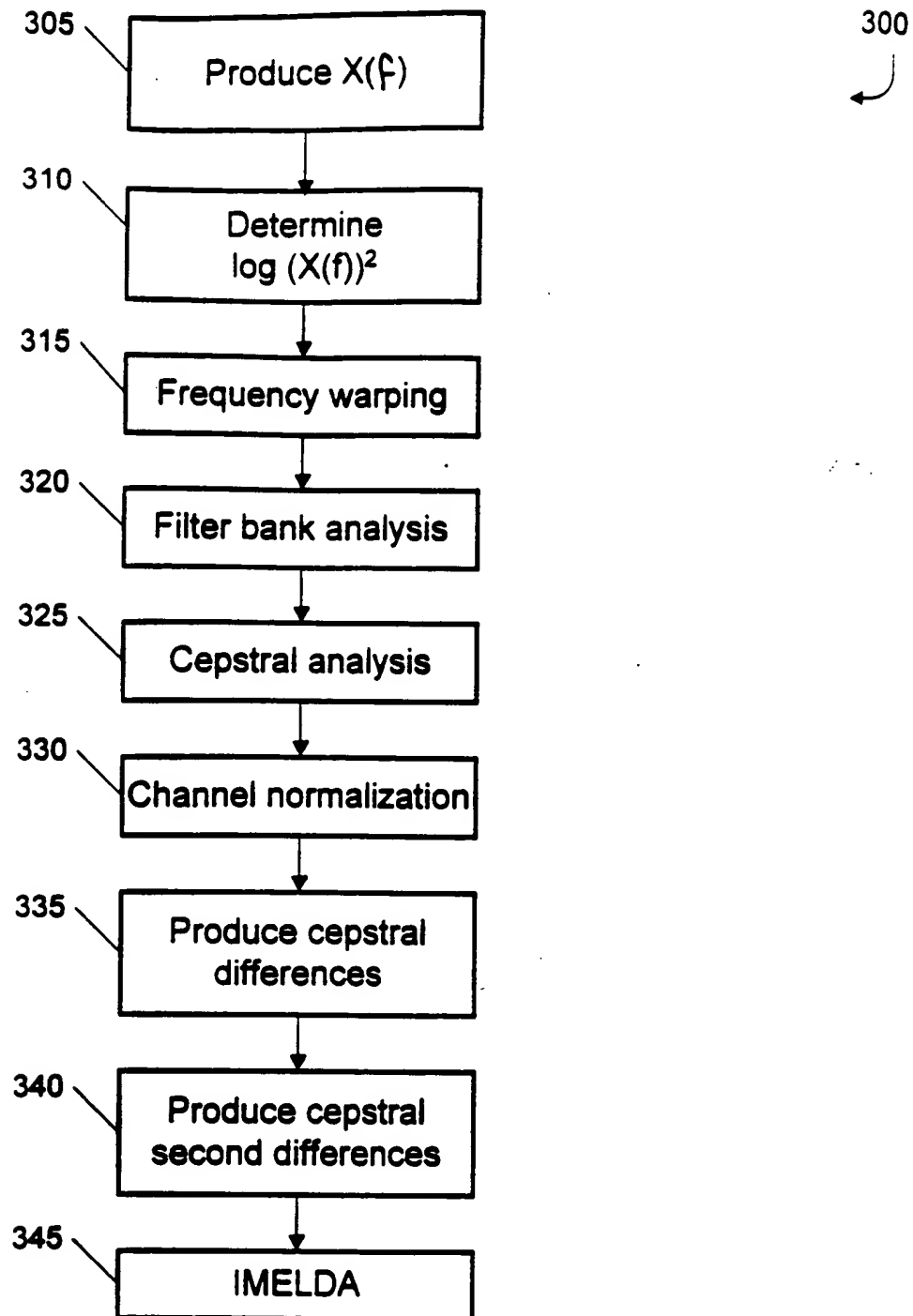
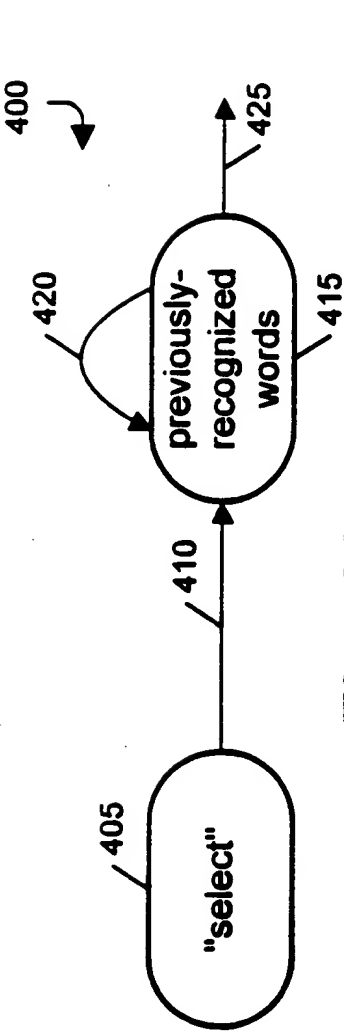


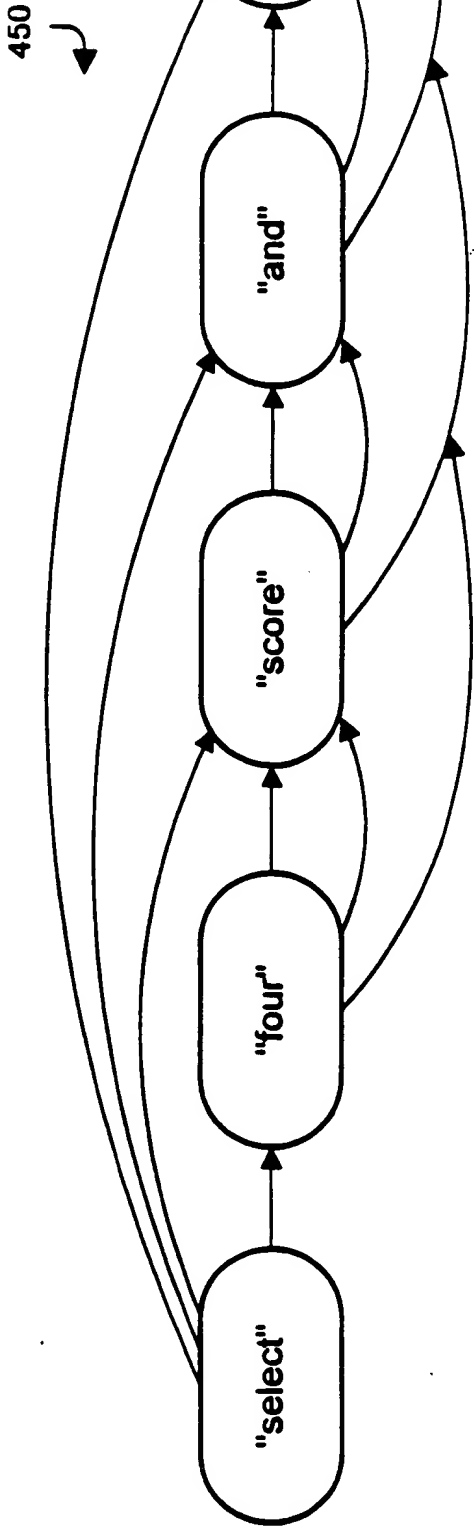
Fig. 2.  
PRIOR ART



**Fig. 3**  
PRIOR ART

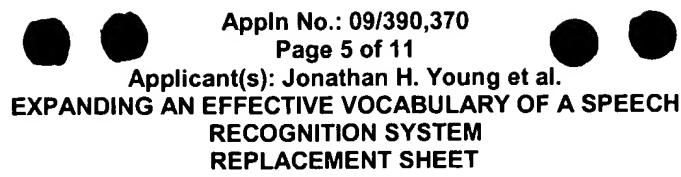


**Fig. 4A**  
PRIOR ART

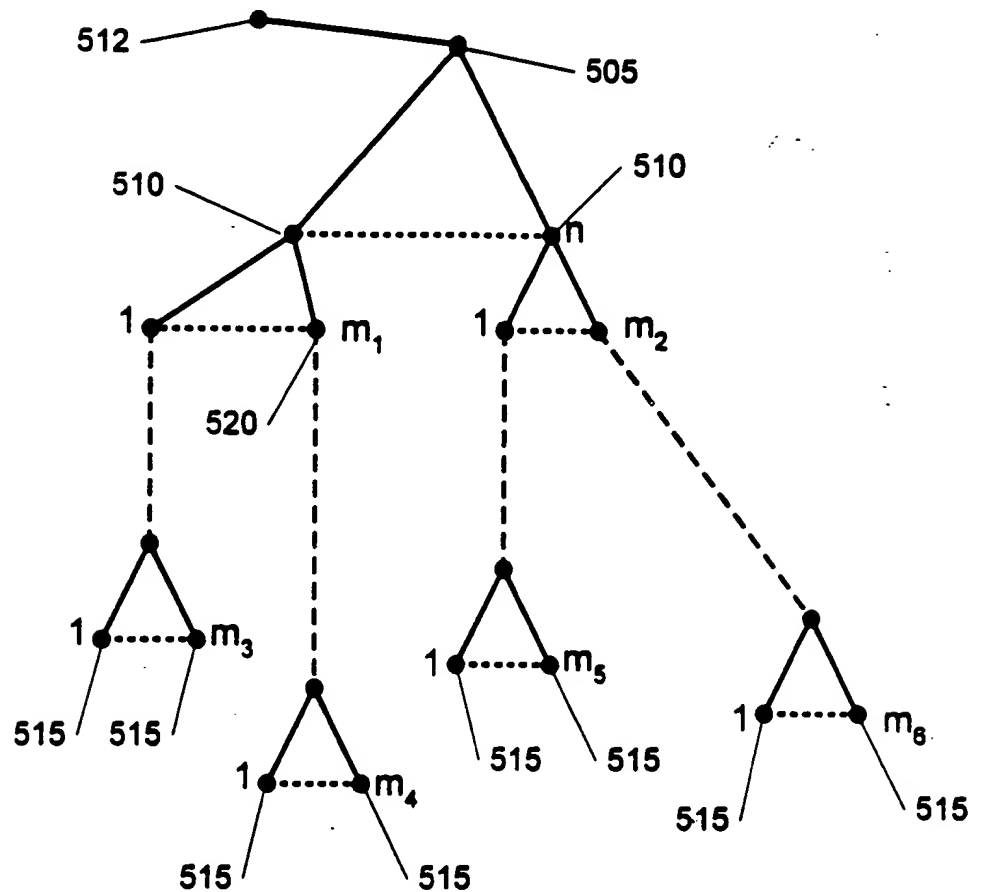


**Fig. 4B**  
PRIOR ART





500

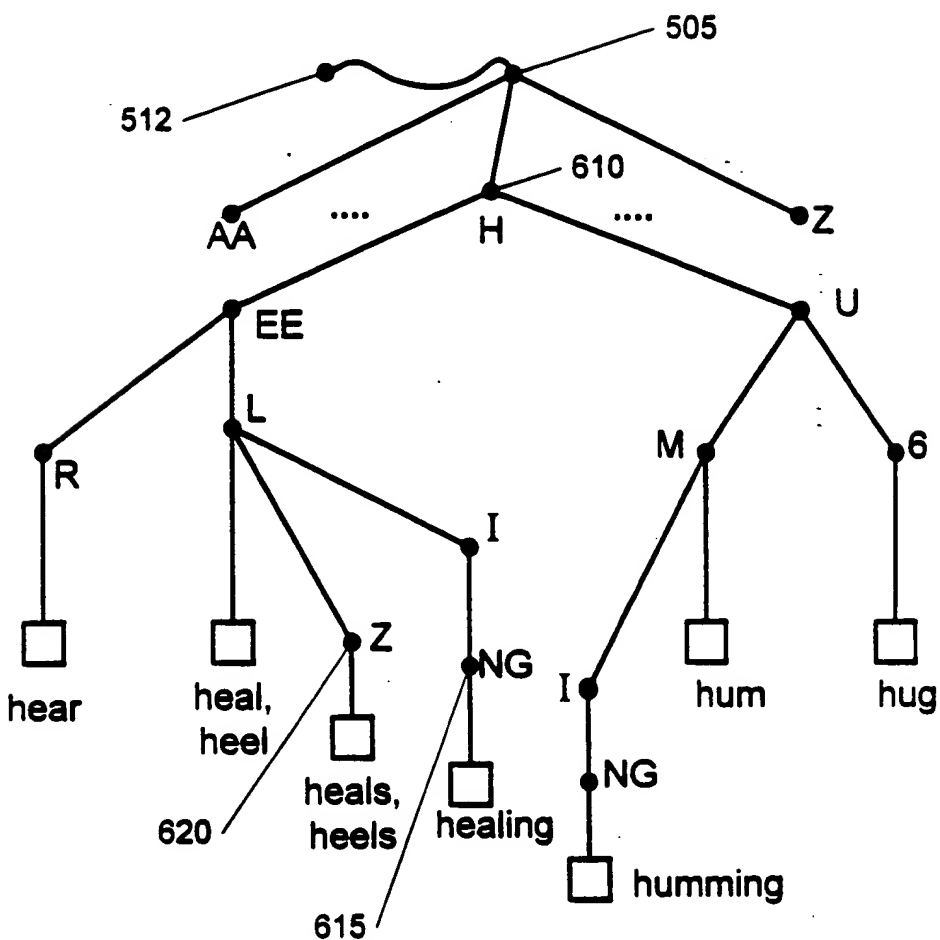


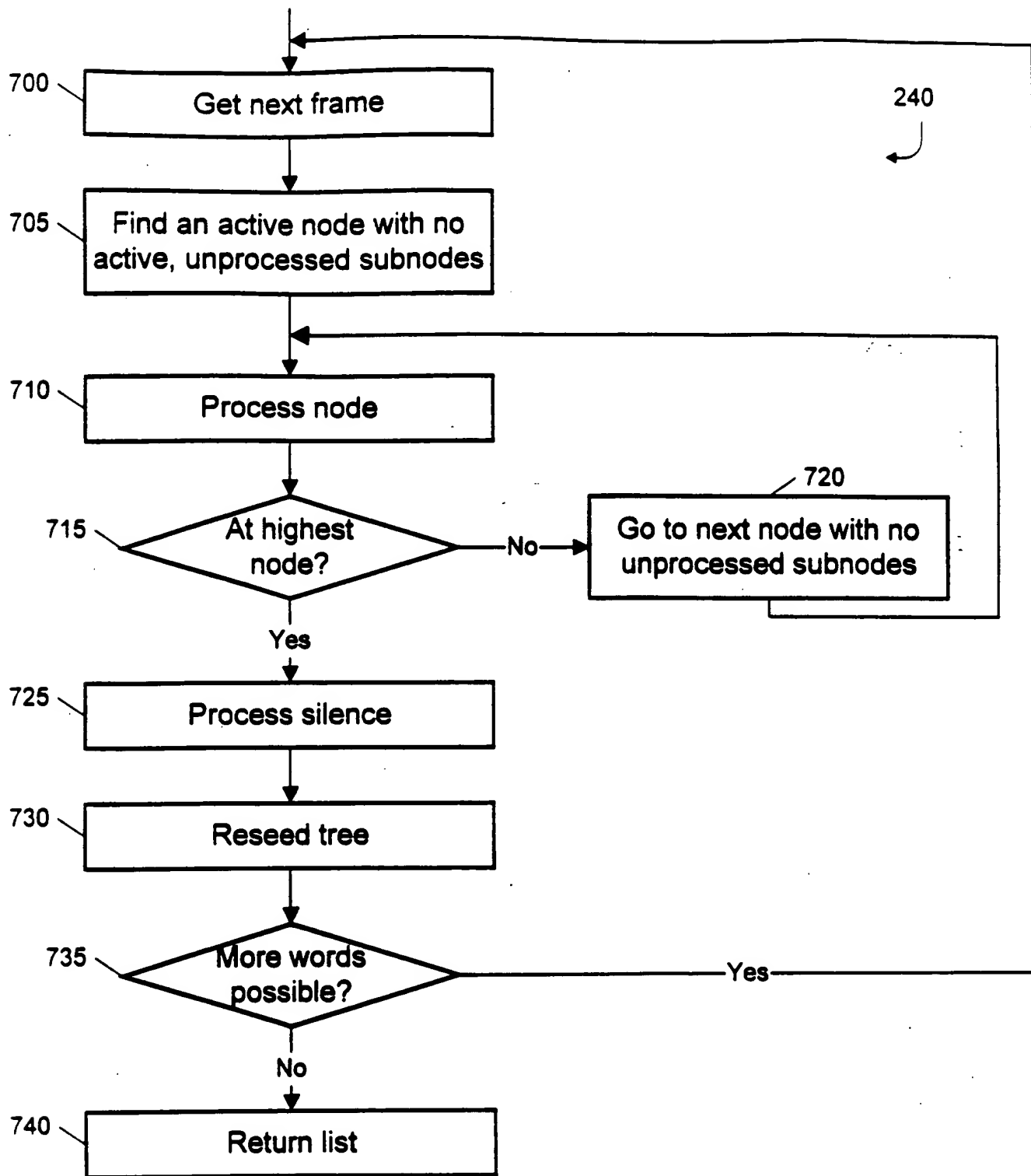


600

**Fig. 6**

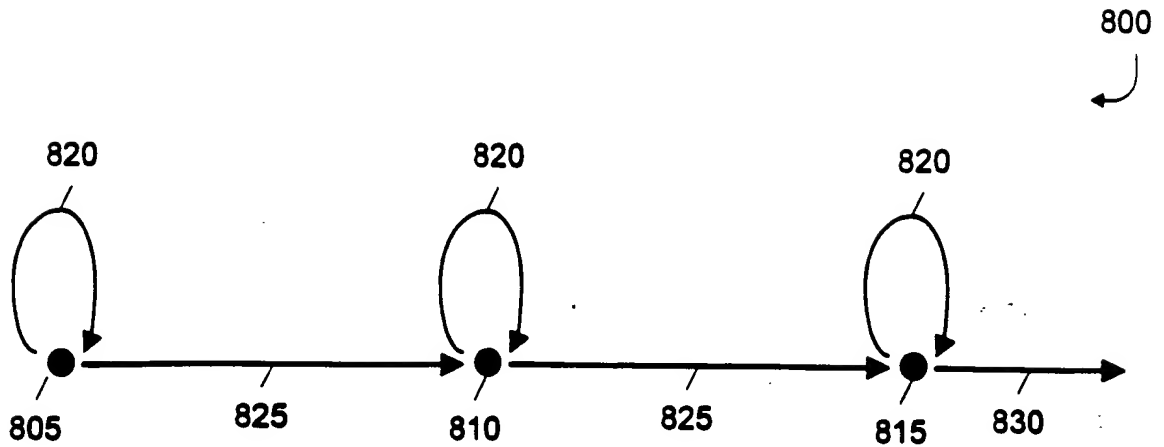
PRIOR ART



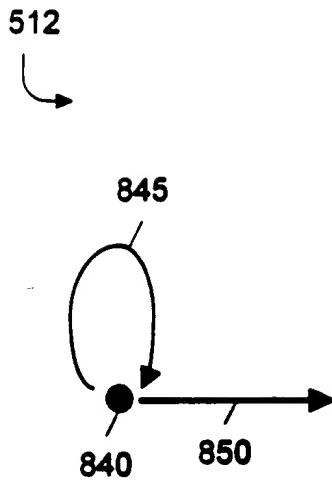


**Fig. 7**

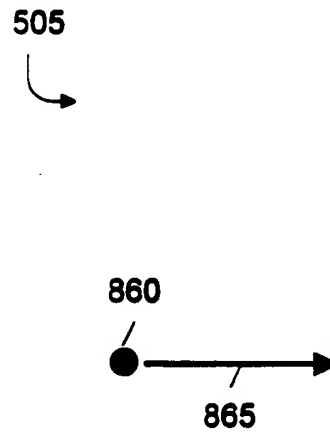
PRIOR ART



**Fig. 8A**  
PRIOR ART



**Fig. 8B**  
PRIOR ART



**Fig. 8C**  
PRIOR ART

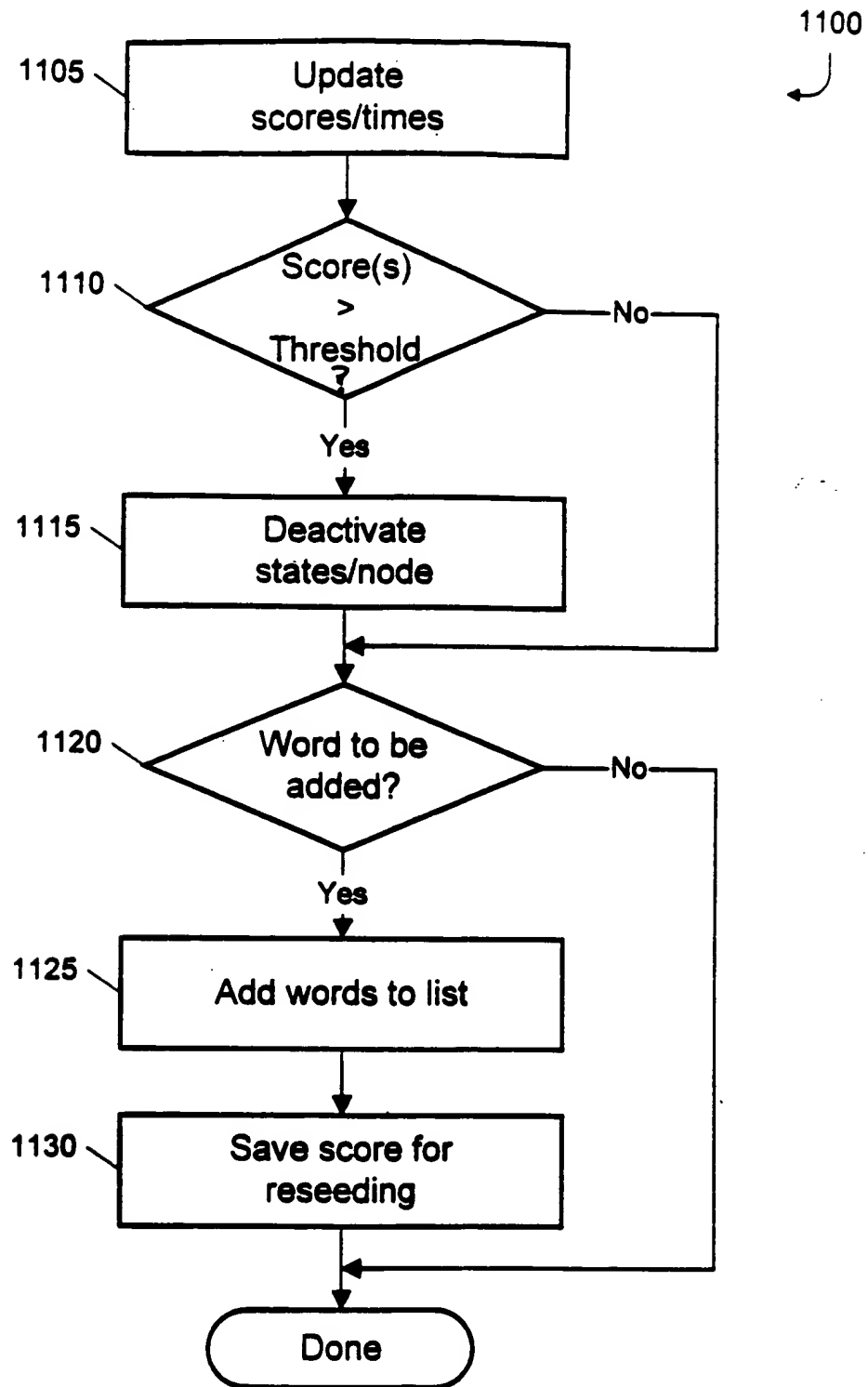


Frame	840 ("A")	805 ("B")	810 ("C")	815 ("D")	Next Node ("N")
900 — 0	0	---	---	---	---
905 — 1	$S_{A1} = A_{A1}$	$S_{B1} = A_{B1}$	---	---	---
910 — 2	$S_{A2} = S_{A1} + A_{A2}$	$S_{B2} = \min(S_{B1}, \text{stay}_B, S_{A1}) + A_{B2}$	$S_{C2} = S_{B1} + \text{leave}_B + A_{C2}$	---	---
915 — 3	$S_{A3} = S_{A2} + A_{A3}$	$S_{B3} = \min(S_{B2}, \text{stay}_B, S_{A2}) + A_{B3}$	$S_{C3} = \min(S_{C2}, \text{stay}_C, S_{B2} + \text{leave}_B) + A_{C3}$	$S_{D3} = S_{C2} + \text{leave}_C + A_{D3}$	---
920 — 4	$S_{A4} = S_{A3} + A_{A4}$	$S_{B4} = \min(S_{B3}, \text{stay}_B, S_{A3}) + A_{B4}$	$S_{C4} = \min(S_{C3}, \text{stay}_C, S_{B3} + \text{leave}_B) + A_{C4}$	$S_{D4} = \min(S_{D3}, \text{stay}_D, S_{C3} + \text{leave}_C) + A_{D4}$	$S_{N4} = S_{D2} + \text{leave}_D + A_{D4}$
925 — n	$S_{An} = S_{An-1} + A_{An}$	$S_{Bn} = \min(S_{Bn-1}, \text{stay}_B, S_{An-1}) + A_{Bn}$	$S_{Cn} = \min(S_{Cn-1}, \text{stay}_C, S_{Bn-1} + \text{leave}_B) + A_{Cn}$	$S_{Dn} = \min(S_{Dn-1}, \text{stay}_D, S_{Cn-1} + \text{leave}_C) + A_{Dn}$	$S_{Nn} = \min(S_{Nn-1}, \text{stay}_{Nn}, S_{Dn-1} + \text{leave}_{Dn}) + A_{Nn}$

**Fig. 9**  
PRIOR ART

Frame	810 ("A")	805 ("B")	810 ("C")	815 ("D")	Next Node ("N")
900 — 0	$S_{A0} = 0$	---	---	---	---
905 — 1	$S_{A1} = f(S_{A0}, A_{A1})$	$S_{B1} = f(S_{A0}, A_{B1})$	---	---	---
910 — 2	$S_{A2} = f(S_{A1}, A_{A2})$	$S_{B2} = f(S_{B1}, \text{stay}_B, S_{A1}, A_{B2})$	$S_{C2} = f(S_{B1}, \text{leave}_B, A_{C2})$	---	---
915 — 3	$S_{A3} = f(S_{A2}, A_{A3})$	$S_{B3} = f(S_{B2}, \text{stay}_B, S_{A2}, A_{B3})$	$S_{C3} = f(S_{C2}, \text{stay}_C, S_{B2}, \text{leave}_B, A_{C3})$	$S_{D3} = f(S_{C2}, \text{leave}_C, A_{D3})$	---
920 — 4	$S_{A4} = f(S_{A3}, A_{A4})$	$S_{B4} = f(S_{B3}, \text{stay}_B, S_{A3}, A_{B4})$	$S_{C4} = f(S_{C3}, \text{stay}_C, S_{B3}, \text{leave}_B, A_{C4})$	$S_{D4} = f(S_{D3}, \text{stay}_D, S_{C3}, \text{leave}_C, A_{D4})$	$S_{N4} = f(S_{D3}, \text{leave}_D, A_{D3})$
925 — n	$S_{An} = f(S_{An-1}, A_{An})$	$S_{Bn} = f(S_{Bn-1}, \text{stay}_B, S_{An-1}, A_{Bn})$	$S_{Cn} = f(S_{Cn-1}, \text{stay}_C, S_{Bn-1}, \text{leave}_B, A_{Cn})$	$S_{Dn} = f(S_{Dn-1}, \text{stay}_D, S_{Cn-1}, \text{leave}_C, A_{Dn})$	$S_{Nn} = f(S_{Dn-1}, \text{leave}_{Nn}, A_{Nn})$

**Fig. 10**  
PRIOR ART



**Fig. 11**  
PRIOR ART



1200

Fig. 12

PRIOR ART

